

CleanTech company profile: Cool Energy

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Cool Energy is a clean energy company pioneering new treating methods for gas conditioning, specifically aimed at providing solutions to commercialise high CO2 gas fields; capturing the CO2 in a liquid form, cutting capital and operating costs, and reducing environmental impact.

The company has developed and successfully tested its trademarked cryogenic CryoCell technology, reputedly the only technology in the world that will treat high CO2 gas fields to the requirements for sales into pipeline systems, while capturing the CO2 in a ready to store form.



The technology extracts the CO2 from a gas stream in a liquid form suitable for geo-sequestration or other industrial applications, the company website explains. The temperature of the gas stream is reduced in stages before being passed through a Joule-Thomson valve that drops the pressure and reduces the temperature to below the CO2 solid formation temperature. The solid CO2 is then separated from the vapour stream.

The CO2 solids separate by gravity to the bottom of the CryoCell separator. Heat is introduced in the separator bottom to melt the CO2, which is removed from the separator as a liquid. CO2 can then simply be pumped up to the injection pressure required for geo-sequestration. Equipment requirements and energy consumption for geo-sequestration compared to conventional technologies are relatively very low, the company says.

Cool Energy was formed in 2003 to take the CryoCell technology from the lab to a demonstration scale, and to further commercialise if successful. By February 2005, initial investors, funding and a test site were secured, and the design of demonstration plant initiated.

The plant was installed and commissioned in May 2006, and testing phase commenced. Field trials were successfully completed by the end of the following year and projects began rolling in by 2008.

The company is currently embarking on a new phase of development with a strategy of both expanding the capability of the technology through further research and development and commercialising the current technology.

The company says it is well funded and has significant backing to commence and complete the new development program and for the foreseeable future towards commercialisation.

The upcoming development program is aimed at expanding the capability of the technology to produce gas that meets the requirements for liquefaction (LNG).

"Once proven this will allow Cool Energy to expand its potential market into the LNG arena. At the same time we are actively pursuing commercial scale opportunities for the existing proven technology," the company said.

Further information and contact details for Cool Energy are available on its [website](#)



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